

RoHS Compliant



AM-/AMC-/AMS-162 V4

Low Noise Amplifier, 12.5 dB Gain, 10 - 100 MHz

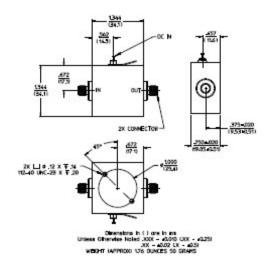
Features

- 1.1 dB Typical Low Noise Figure @ 50 MHz
- +15 dBm Typical High Output Power @ 50 MHz
- +32 dBm Typical Third Order Intercept @ 50 MHz
- Fully Hermetic Package (AM-162, AMS-162)

Description

M/A-COM's AM-162 is a coupler feedback amplifier with high intercept and compression points. The use of coupler feedback minimizes noise figure and current in a high intercept amplifier. This amplifier is packaged in a TO-8-1 package, a surface mount package and a connectorized version. The ground plane on the PC board should be configured to remove heat from under the package. AM-162 are ideally suited for use where a high intercept, high reliability amplifier is required.

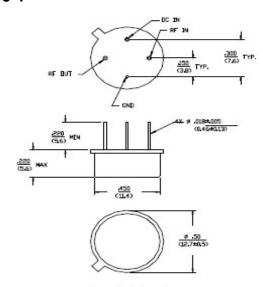
C-6



Pin Configuration (For AMS-162)

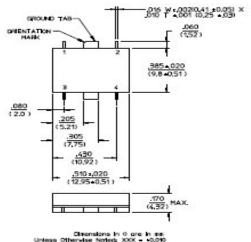
Pin No.	Function	Pin No.	Function
1	RF OUT	3	RF IN
2	VDC	4	GND

TO-8-1



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SF-1



Unless Otherwise Notec: XXX = 40,010

XX = 40,02

WEIGHT (APPROX), 0,07 OUNCES 2 GRAMS

Absolute Maximum Ratings ¹

Parameter	Absolute Maximum
Max. Input Power	+10 dBm
Vbias	+15.75 V
Operating Temperature	-55°C to +85°C
Storage Temperature	-65°C to +125°C

- 1. Operation of this device above any one of these parameters may cause permanent damage.
- North America Tel: 800.366.2266 / Fax: 978.366.2266
- Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298

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Visit www.macom.com for additional data sheets and product information.



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Electrical Specifications: ²T_A = -55°C to +85°C Case Temperature

Parameter	Test Conditions	Frequency	Units	Min.	Тур.	Max.
Gain	@+25°C	50 MHz	dB	12.0	12.5	13.0
Frequency Response	_	10 - 100 MHz	dB	_	_	±0.6
Gain Variation with Temperature	-	10 - 100 MHz	dB	_	_	±0.6
1 dB Compression	Output Power	10 - 100 MHz	dBm	+13	_	_
Noise Figure	_	10 - 100 MHz	dB	_	_	1.6
Reverse Transmission	_	10 - 100 MHz	dB	_	-15	-14
VSWR	_	10 - 100 MHz	Ratio	_	_	2.0:1
Output IP ₂	Two-Tone inputs up to 0 dBm	10 - 100 MHz	dBm	+40	_	_
Output IP ₃	Two-Tone inputs up to 0 dBm	10 - 100 MHz	dBm	+26	_	_
Vbias	_	_	VDC	+14.5	+15.0	+15.5
Ibias	Vbias = +15.0 VDC	_	mA	_	11	15
Power Dissipation	@ +15 V Bias	_	mW	_	165	_

^{2.} All specifications apply when operated at +15 VDC, with 50 ohms source and load impedance.

S-Parameter Data

Frequency (MHz)	S11 MAG/ANG	S21 MAG/ANG	S12 MAG/ANG	S22 MAG/ANG
10	0.07/165	4.06/66	0.18	0.09/169.1
20	0.09/-166.8	4.13/-6.5	0.17	0.09/-159.2
30	0.08/-151.5	4.18/-15.8	0.17	0.09/-129.5
40	0.10/-146.9	4.20/-24.0	0.17	0.11/-120.3
50	0.11/-147.9	4.23/-32.2	0.17 1	0.12/-117.7
60	0.11/-152.0	4.19/-39.8	0.17	0.13/-118.5
70	0.12/-159.7	4.20/-47.7	0.17	0.14/-120.3
85	0.12/-171.2	4.17/-59.5	0.16	0.14/-122.6
100	0.12/174.1	4.15/-72.1	0.16	0.15/-123.6

²

information.

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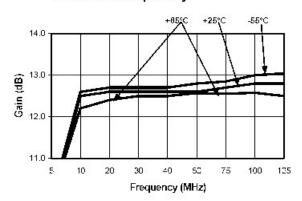


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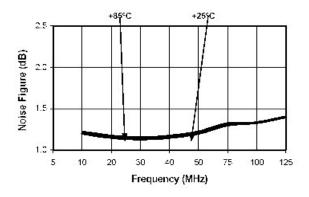
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Typical Performance Curves

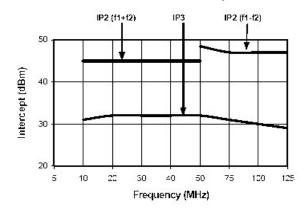
Gain vs. Frequency



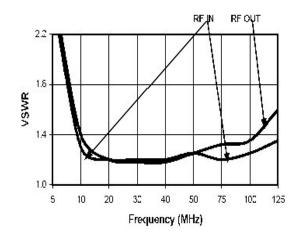
Noise Figure



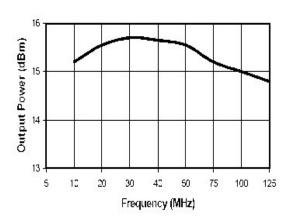
Intermodulation Intercept



VSWR vs. Frequency



1 dB Compression



Ordering Information

Part Number	Package
AM-162 PIN	TO-8-1
AMC-162 SMA **	C-6
AMS-162 PIN	SF-1

^{**} The connectorized version is not RoHs compliant.

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